

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

ARBOR GLOBAL STRATEGIES, LLC,

Plaintiff

v.

XILINX, INC.,

Defendant.

C.A. No. 19-01986-MN

**JURY TRIAL DEMANDED**

**DEFENDANT XILINX, INC.'S ANSWER TO COMPLAINT  
FOR PATENT INFRINGEMENT**

Xilinx, Inc. (“Xilinx”) answers Arbor Global Strategies LLC (“Arbor”) Complaint (Dkt. No. 1) as follows:

Xilinx denies each and every allegation and characterization in Arbor’s Complaint unless expressly admitted in the following paragraphs:

**THE PARTIES**

1. Xilinx denies that Arbor holds the patents-in-suit, and further states that Arbor is an entity formed shortly before suing Xilinx, and has averred in court filings that it has no employees. At least on this basis, Xilinx denies the first and second sentence of Paragraph 1. Xilinx lacks knowledge or information sufficient to form a belief as to the truth of the allegations of the remainder of Paragraph 1, and therefore denies the same.

2. Xilinx lacks knowledge or information sufficient to form a belief as to the truth of the allegations of Paragraph 2, and therefore denies the same.

3. Xilinx admits Paragraph 3.

4. Xilinx admits that part of its business relates to products that utilize Field-Programmable Gate Arrays (“FPGAs”). However, Plaintiff has not specified what IC products it

is referring to, or what it means by “these ICs include the use of through-silicon vias within an IC, such as between multiple die layers or components that include at least one FPGA” and therefore Xilinx is without sufficient information to answer Paragraph 4 and denies same. Xilinx further denies that it is in the business of manufacturing IC products.

#### **JURISDICTION AND VENUE**

5. Xilinx admits Paragraph 5.

6. Xilinx admits that this Court has personal jurisdiction over it in this district.

Xilinx denies the remainder of Paragraph 6 and in particular denies that it has committed infringing activities in this district.

7. Xilinx admits Paragraph 7.

#### **ARBOR’S PURPORTED INNOVATIONS**

8. Xilinx denies Paragraph 8. Further, Xilinx notes that Arbor was created in 2019 a few weeks before suing Xilinx. Xilinx denies that Arbor holds the patents-in-suit, or that the patents-in-suit are innovative or valid over the prior art.

9. Xilinx denies Paragraph 9 including because Xilinx denies that the patents-in-suit are “Arbor’s patents” or were “developed by Arbor.”

10. Xilinx denies the first sentence of Paragraph 10 including for the reasons stated in Xilinx’s answer to Paragraph 8, incorporated herein. Xilinx denies the second sentence including because high bandwidth memory is not an “example” of “Arbor’s inventive use of TSVs.” Xilinx denies the final sentence in Paragraph 10.

#### **THE ASSERTED PATENTS**

11. Xilinx admits that the ’226 Patent facially states that it was issued on August 24, 2004 to Jon M. Huppenthal and D. James Guzy and is titled “Reconfigurable Processor Module

Comprising Hybrid Stacked Integrated Circuit Die Elements.” Xilinx admits that Exhibit 1 appears to be a true and correct copy of the ’226 Patent.

12. Xilinx denies Paragraph 12.

13. Xilinx denies Paragraph 13. Xilinx further states that the ’226 Patent speaks for itself.

14. Xilinx admits that the ’214 Patent facially states that it was issued on October 24, 2006 to Jon M. Huppenthal and D. James Guzy and is titled “Reconfigurable Processor Module Comprising Hybrid Stacked Integrated Circuit Die Elements.” Xilinx admits that Exhibit 2 appears to be a true and correct copy of the ’214 Patent.

15. Xilinx denies Paragraph 15.

16. Xilinx denies Paragraph 16. Xilinx further states that the ’214 Patent speaks for itself.

17. Xilinx admits that the ’951 Patent facially states that it was issued on October 16, 2007 to Jon M. Huppenthal and D. James Guzy and is titled “Reconfigurable Processor Module Comprising Hybrid Stacked Integrated Circuit Die Elements.” Xilinx admits that Exhibit 3 appears to be a true and correct copy of the ’951 Patent.

18. Xilinx denies Paragraph 18.

19. Xilinx denies Paragraph 19. Xilinx further states that the ’951 Patent speaks for itself.

20. Xilinx admits that the ’035 Patent facially states that it was issued on January 18, 2011 to Jon M. Huppenthal and D. James Guzy and is titled “Reconfigurable Processor Module Comprising Hybrid Stacked Integrated Circuit Die Elements.” Xilinx admits that Exhibit 4 appears to be a true and correct copy of the ’035 Patent.

21. Xilinx denies Paragraph 21.

22. Xilinx denies Paragraph 22. Xilinx further states that the '035 Patent speaks for itself.

23. Xilinx denies Paragraph 23. Xilinx further states that the patents-in-suit speak for themselves. Further as to the last sentence of Paragraph 23, Xilinx denies that it has “adopted” the patents-in-suit and deny that any Xilinx product practices the patents-in-suit.

**DEFENDANT’S (NON-)INFRINGING PRODUCTS AND TECHNOLOGIES**

24. Xilinx denies Paragraph 24 at least on the basis that Plaintiff inaccurately describes a list of product families as being “Xilinx’s ICs with 3D Stacked Silicon Interconnects (‘SSI’) and HBM.” As a result, Plaintiff’s definition of “Accused Products” is not well defined. Xilinx further notes that product families like the Xilinx Virtex FPGA pre-date the patents-in-suit, and therefore would be prior art to the patents-in-suit. Xilinx further denies Paragraph 24 at least on the basis that Plaintiff has not defined what it means by “IC module” and so Xilinx is without sufficient information to reply to the allegation and denies same.

25. Xilinx denies Paragraph 25. Arbor has not defined at least what it means by “3D ICs,” “enable high-bandwidth connectivity massive inter-die bandwidth-per-watt” or “multiple chip approach” and therefore Xilinx is without sufficient information to respond to this allegation and therefore denies Paragraph 25.

26. Xilinx denies Paragraph 26, including because Plaintiff has not defined at least “3D high-performance FPGA IC,” or what it means by the second sentence, and therefore Xilinx is without sufficient information to respond to this allegation and therefore denies same.

27. Xilinx denies Paragraph 27. Xilinx incorporates its answer to Paragraph 24 and denies Paragraph 27, at least because Accused Products is not well defined. Further, Plaintiff has not defined at least what it means by “microbump technologies with TSVs” or “deliver reliable

interconnect without performance degradation” and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 27.

28. Xilinx denies Paragraph 28. Plaintiff has not defined at least what it means by “may be designed to work with HBM” and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 28. Xilinx further denies this Paragraph at least on the basis that Xilinx denies the claim as to what is “taught in Arbor's Patents” and specifically denies that Xilinx's Virtex UltraScale+ products practice any of the patents-in-suit.

#### **COUNT I**

##### **(Alleged Direct Infringement of the ‘226 Patent pursuant to 35 U.S.C. § 271(a))**

29. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

30. Xilinx denies Paragraph 30.

31. Xilinx denies Paragraph 31.

32. Xilinx denies Paragraph 32. Xilinx further states that it has not made, used, imported, or offered for sale products and services that infringe the patents-in-suit.

33. Xilinx denies Paragraph 33. Xilinx further states that “‘226 Accused Products” is not well defined for the same reasons stated in Xilinx’s answer to Paragraph 24, incorporated herein.

34. Xilinx denies Paragraph 34.

35. Xilinx denies Paragraph 35. Arbor has not defined at least what it means by “3D integrated circuits,” “CLBs,” or “a module structure including FPGA building blocks as stacked tiles” and so Xilinx is without information sufficient to answer Paragraph 35 and for at least that

reason denies same. Xilinx further incorporates its answer to Paragraph 33 and denies Paragraph 35 at least because '226 Accused Products is not well defined.

36. Xilinx denies Paragraph 36. Plaintiff has not defined what it means by “FPGA IC die elements” and “electrically coupled”, which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 36. Xilinx further incorporates its answer to Paragraph 33 and denies Paragraph 36 at least because '226 Accused Products is not well defined. Xilinx further states that “Virtex-7” described in the caption to the image in Paragraph 36 is not included in the '226 Accused Products.

37. Xilinx denies Paragraph 37. Xilinx incorporates its answer to Paragraph 33 and denies Paragraph 37 at least because '226 Accused Products is not well defined. Plaintiff has not defined what it means by “electrically coupled and interconnected”, which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 37. Xilinx further states that Arbor has not identified what it means by “Xilinx’s product materials,” and so Xilinx is without sufficient information to respond to Paragraph 37 and on at least that basis Xilinx denies Paragraph 37.

38. Xilinx denies Paragraph 38. Xilinx incorporates its answer to Paragraph 33 and denies Paragraph 38 at least because '226 Accused Products is not well defined. Plaintiff has not defined what it means by “accelerate” and “processing of data,” which Xilinx notes are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 38. Xilinx denies the remainder of Paragraph 38, which is made without context, if it is intended to be applied to the '226 Accused Products.

39. Xilinx denies Paragraph 39. Xilinx incorporates its answer to Paragraph 33 and denies Paragraph 39 at least because '226 Accused Products is not well defined. Plaintiff has not

defined what it means by “block” RAM, which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 39.

40. Xilinx denies Paragraph 40. Xilinx states that Paragraph 40 is not directed to any product, and therefore Xilinx is without sufficient information to evaluate this allegation and denies same. Plaintiff has not defined what it means by “electrically coupled,” which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 40.

41. Xilinx denies Paragraph 41. Xilinx incorporates its answer to Paragraph 33 and denies Paragraph 41 at least because ’226 Accused Products is not well defined. Plaintiff has not defined what it means by “accelerated” and “processing of data,” which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 41. Further, Plaintiff has not defined what it means by “CLBs,” “DSPs,” “power and reliability issues,” “massive bandwidth” or explain to what “degrading or requiring additional power” means and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 41.

42. Xilinx denies Paragraph 42.

43. Xilinx denies Paragraph 43.

## **COUNT II**

### **(Alleged Indirect Infringement of the ‘226 Patent pursuant to 35 U.S.C. § 271(b))**

44. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

45. Xilinx denies Paragraph 45. Xilinx incorporates its answer to Paragraph 33 and denies Paragraph 45 at least because ’226 Accused Products is not well defined. Xilinx further denies that any Xilinx products infringe the patents-in-suit.

46. Xilinx denies Paragraph 46.

47. Xilinx denies Paragraph 47.

**COUNT III**

**(Alleged Direct Infringement of the '214 Patent pursuant to 35 U.S.C. § 271(a))**

48. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

49. Xilinx denies Paragraph 49.

50. Xilinx denies Paragraph 50.

51. Xilinx denies Paragraph 51. Xilinx further states that it has not made, used, imported, or offered for sale products and services that infringe the patents-in-suit.

52. Xilinx denies Paragraph 52. Xilinx further states that “’214 Accused Products” is not well defined for the same reasons stated in Xilinx’s answer to Paragraph 24, incorporated herein.

53. Xilinx denies Paragraph 53.

54. Xilinx denies Paragraph 54. Arbor has not defined what it means by “3D integrated circuits,” “CLBs,” or “a module structure including FPGA building blocks as stacked tiles” and so Xilinx is without information sufficient to answer Paragraph 54 and for at least that reason denies same. Xilinx further incorporates its answer to Paragraph 52 and denies Paragraph 54 at least because ’214 Accused Products is not well defined.

55. Xilinx denies Paragraph 55. Plaintiff has not defined what it means by “microprocessor IC die elements” and “electrically coupled”, which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 55. Xilinx further incorporates its answer to Paragraph 52 and denies Paragraph 55 at least because ’214 Accused Products is not well defined. Xilinx further states that “Virtex-7”

described in the caption to the image in Paragraph 55 is not included in the '214 Accused Products.

56. Xilinx denies Paragraph 56. Xilinx incorporates its answer to Paragraph 52 and denies Paragraph 56 at least because '214 Accused Products is not well defined. Plaintiff has not defined what it means by “block” RAM, which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 56.

57. Xilinx denies Paragraph 57. Xilinx states that Paragraph 57 is not directed to any product, and therefore Xilinx is without sufficient information to evaluate this allegation and denies same. Plaintiff has not defined what it means by “electrically coupled,” which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 57.

58. Xilinx denies Paragraph 58. Xilinx incorporates its answer to Paragraph 52 and denies Paragraph 58 at least because '214 Accused Products is not well defined. Plaintiff has not defined what it means by “accelerate” and “processing of data,” which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis denies Paragraph 58. Further, Plaintiff has not defined what it means by “CLBs,” “DSPs,” “power and reliability issues,” “massive bandwidth” or explain to what “degrading or requiring additional power” means and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 58.

59. Xilinx denies Paragraph 59

60. Xilinx denies Paragraph 60.

**COUNT IV**

**(Alleged Indirect Infringement of the '214 Patent pursuant to 35 U.S.C. § 271(b))**

61. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

62. Xilinx denies Paragraph 62. Xilinx incorporates its answer to Paragraph 52 and denies Paragraph 62 at least because '214 Accused Products is not well defined. Xilinx further denies that any Xilinx products infringe the patents-in-suit.

63. Xilinx denies Paragraph 63.

64. Xilinx denies Paragraph 64.

**COUNT V**

**(Alleged Direct Infringement of the '951 Patent pursuant to 35 U.S.C. § 271(a))**

65. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

66. Xilinx denies Paragraph 66.

67. Xilinx denies Paragraph 67.

68. Xilinx denies Paragraph 68. Xilinx further states that it has not made, used, imported, or offered for sale products and services that infringe the patents-in-suit.

69. Xilinx denies Paragraph 69. Xilinx further states that "'951 Accused Products" is not well defined for the same reasons stated in Xilinx's answer to Paragraph 24, incorporated herein.

70. Xilinx denies Paragraph 70.

71. Xilinx denies Paragraph 71. Arbor has not defined what it means by "3D integrated circuits," "CLBs," or "a module structure including FPGA building blocks as stacked tiles" and so Xilinx is without information sufficient to answer Paragraph 71 and for at least that

reason denies same. Xilinx further incorporates its answer to Paragraph 69 and denies Paragraph 71 at least because '951 Accused Products is not well defined.

72. Xilinx denies Paragraph 72. Xilinx incorporates its answer to Paragraph 69 and denies Paragraph 72 at least because '951 Accused Products is not well defined. Xilinx further states that "Virtex-7-2000T" described in the caption to the image in Paragraph 72 is not included in the '951 Accused Products. Plaintiff has not defined what it means by "microprocessor IC die element," "memory array" or "electrically coupled," which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 72.

73. Xilinx denies Paragraph 73. Xilinx incorporates its answer to Paragraph 69 and denies Paragraph 73 at least because '951 Accused Products is not well defined. Xilinx further states that "Virtex-7" described in the caption to the image in Paragraph 73 is not included in the '951 Accused Products. Plaintiff has not defined what it means by "electrically coupled," which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 73. Xilinx further states that Arbor has not identified what it means by "form factor" or "power footprints" and so Xilinx is without sufficient information to respond to Paragraph 73 and on at least that basis Xilinx denies Paragraph 73.

74. Xilinx denies Paragraph 74. Xilinx incorporates its answer to Paragraph 69 and denies Paragraph 74 at least because '951 Accused Products is not well defined. Plaintiff has not defined what it means by "accelerate" and "processing of data," which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 74. Further, Plaintiff has not defined what it means by "CLBs," "DSPs," "power and reliability issues," "massive bandwidth" or explain to what "degrading or requiring additional

power” means and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 74.

75. Xilinx denies Paragraph 75. Xilinx incorporates its answer to Paragraph 69 and denies Paragraph 75 at least because ’951 Accused Products is not well defined. Plaintiff has not defined what it means by “block RAM”, which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 75.

76. Xilinx denies Paragraph 76. Xilinx incorporates its answer to Paragraph 69 and denies Paragraph 76 at least because ’951 Accused Products is not well defined. Plaintiff has not defined what it means by “accelerate” and “processing of data,” which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 76. Further, Plaintiff has not defined what it means by “CLBs,” “DSPs,” “power and reliability issues,” “massive bandwidth” or explain to what “degrading or requiring additional power” means and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 76.

77. Xilinx denies Paragraph 77.

78. Xilinx denies Paragraph 78.

#### **COUNT VI**

#### **(Alleged Indirect Infringement of the ‘951 Patent pursuant to 35 U.S.C. § 271(b))**

79. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

80. Xilinx denies Paragraph 80. Xilinx incorporates its answer to Paragraph 69 and denies Paragraph 80 at least because ’951 Accused Products is not well defined. Xilinx further denies that any Xilinx products infringe the patents-in-suit.

81. Xilinx denies Paragraph 81.

82. Xilinx denies Paragraph 82.

**COUNT VII**

**(Alleged Direct Infringement of the '035 Patent pursuant to 35 U.S.C. § 271(a))**

83. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

84. Xilinx denies Paragraph 84.

85. Xilinx denies Paragraph 85.

86. Xilinx denies Paragraph 86. Xilinx further states that it has not made, used, imported, or offered for sale products and services that infringe the patents-in-suit.

87. Xilinx denies Paragraph 87. Xilinx further states that "'035 Accused Products" is not well defined for the same reasons stated in Xilinx's answer to Paragraph 24, incorporated herein.

88. Xilinx denies Paragraph 88.

89. Xilinx denies Paragraph 89. Arbor has not defined what it means by "3D integrated circuits," "CLBs," or "a module structure including FPGA building blocks as stacked tiles" and so Xilinx is without information sufficient to answer Paragraph 89 and for at least that reason denies same. Xilinx further incorporates its answer to Paragraph 87 and denies Paragraph 89 at least because '035 Accused Products is not well defined.

90. Xilinx denies Paragraph 90. Xilinx incorporates its answer to Paragraph 87 and denies Paragraph 90 at least because '035 Accused Products is not well defined. Xilinx further states that "Virtex-7-2000T" described in the caption to the image in Paragraph 90 is not included in the '035 Accused Products. Plaintiff has not defined what it means by "microprocessor IC die element," "memory array" or "electrically coupled," which are claim

terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 90.

91. Xilinx denies Paragraph 91. Xilinx incorporates its answer to Paragraph 87 and denies Paragraph 91 at least because '035 Accused Products is not well defined. Xilinx further states that "Virtex-7" described in the caption to the image in Paragraph 91 is not included in the '035 Accused Products. Plaintiff has not defined what it means by "electrically coupled," which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 91. Xilinx further states that Arbor has not identified what it means by "form factor" or "power footprints" and so Xilinx is without sufficient information to respond to Paragraph 91 and on at least that basis Xilinx denies Paragraph 91.

92. Xilinx denies Paragraph 92. Xilinx incorporates its answer to Paragraph 87 and denies Paragraph 92 at least because '035 Accused Products is not well defined. Plaintiff has not defined what it means by "block" RAM, which is a claim term in the patents-in-suit that has not been construed by this Court, and on at least that basis Xilinx denies Paragraph 92.

93. Xilinx denies Paragraph 93. Xilinx incorporates its answer to Paragraph 87 and denies Paragraph 93 at least because '035 Accused Products is not well defined. Plaintiff has not defined what it means by "accelerate" and "processing of data," which are claim terms in the patents-in-suit that have not been construed by this Court, and on at least that basis Xilinx denies Paragraph 93. Further, Plaintiff has not defined what it means by "CLBs," "DSPs," "power and reliability issues," "massive bandwidth" or explain to what "degrading or requiring additional power" means and therefore Xilinx is without sufficient information to respond to the allegation and on at least that basis denies Paragraph 93.

94. Xilinx denies Paragraph 94.

95. Xilinx denies Paragraph 95.

**COUNT VIII**

**(Alleged Indirect Infringement of the '035 Patent pursuant to 35 U.S.C. § 271(b))**

96. Xilinx repeats, realleges, and incorporates by reference, as if fully set forth herein, its allegations in the preceding paragraphs, as set forth above.

97. Xilinx denies Paragraph 97. Xilinx incorporates its answer to Paragraph 87 and denies Paragraph 97 at least because '035 Accused Products is not well defined. Xilinx further denies that any Xilinx products infringe the patents-in-suit.

98. Xilinx denies Paragraph 98.

99. Xilinx denies Paragraph 99.

**RESPONSE TO PRAYER FOR RELIEF**

WHEREFORE, Xilinx prays for entry of judgment in its favor and against Plaintiff Arbor and for relief as follows:

- (a) that Arbor's Complaint be dismissed with prejudice;
- (b) that Arbor take nothing by reason of its Complaint;
- (c) that the Court declare this case exceptional;
- (d) that the Court award Xilinx its costs and attorneys' fees pursuant to 35 U.S.C. § 285; and
- (e) such other and further relief as this Court finds just and proper.

**AFFIRMATIVE DEFENSES**

Xilinx reserves the right to amend its Answer to add additional affirmative defenses consistent with the facts discovered in the case. Subject to that limitation, Xilinx asserts the following affirmative defenses, without assuming the burden of proof when such burden would otherwise be on Arbor.

**FIRST AFFIRMATIVE DEFENSE  
(Failure to State a Claim)**

Arbor has failed to state a claim upon which relief can be granted, including by failing to allege or show sufficient facts.

**SECOND AFFIRMATIVE DEFENSE  
(No Infringement)**

Xilinx has not infringed and does not infringe, under any theory of infringement (including directly (whether individually or jointly), or indirectly (whether contributorily or by inducement), or willfully), any valid, enforceable claim of the '226 Patent, the '214 Patent, the '951 Patent, or the '035 Patent.

**THIRD AFFIRMATIVE DEFENSE  
(Invalidity)**

Each asserted claim of the '226 patent, the '214 Patent, the '951 Patent, and the '035 Patent is invalid for failure to comply with one or more of the requirements of the United States Code, Title 35, including and without limitation, 35 U.S.C. §§ 101, 102, 103, and 112, and the rules, regulations, and laws pertaining thereto.

**FOURTH AFFIRMATIVE DEFENSE  
(Estoppel)**

Arbor's claims against Xilinx are barred, in whole or in part, by the doctrine of estoppel, including, but not limited to, prosecution history estoppel arising from a patentee's actions, representations, or conduct before the United States Patent and Trademark Office during the prosecutions of each of the '226, '214, '951, and '035 patents, and equitable estoppel and estoppel by acquiescence arising from Arbor's actions and inactions.

**FIFTH AFFIRMATIVE DEFENSE  
(Equitable Doctrines)**

Arbor's claims against Xilinx are barred, in whole or in part, by one or more of the

equitable doctrines of laches, waiver, and unclean hands.

**SIXTH AFFIRMATIVE DEFENSE  
(Ownership and Standing)**

Arbor does not own the '226, '214, '951, and '035 patents and does not have standing to assert the claims of its Complaint.

**SEVENTH AFFIRMATIVE DEFENSE  
(Patent Exhaustion)**

Arbor's claims are barred, in whole or in part, under the doctrines of patent exhaustion, collateral estoppel, and/or first sale.

**EIGHTH AFFIRMATIVE DEFENSE  
(Limitations of Injunctive Relief and Recovery)**

Arbor is not entitled to injunctive relief against Xilinx because Arbor has an adequate remedy at law for any proved infringement, and is not seeking injunctive relief in its Prayer. On information and belief, Arbor is not competing with Xilinx and is not practicing the alleged inventions of the '226, '214, '951, and/or '035 patents.

**NINTH AFFIRMATIVE DEFENSE  
(Time Limitations on Monetary Damages)**

To the extent Arbor seeks recovery for any alleged infringement committed prior to the filing of the Complaint, such recovery is barred in whole or in part by 35 U.S.C. §§ 286 and/or 287.

**TENTH AFFIRMATIVE DEFENSE  
(Preclusion from Recovery of Costs)**

Arbor is precluded from seeking recovery of costs by 35 U.S.C. § 288.

**ELEVENTH AFFIRMATIVE DEFENSE  
(Failure to Mitigate Damages)**

Arbor failed to mitigate damages by taking reasonable steps to minimize or prevent the

harm that Arbor claims to have incurred.

**TWELFTH AFFIRMATIVE DEFENSE  
(No Willfulness)**

Xilinx did not engage in egregious or willful misconduct.

**THIRTEENTH AFFIRMATIVE DEFENSE  
(No Enhanced Damages Under 35 U.S.C. § 284)**

Xilinx has not engaged in any conduct which would entitle Arbor to an award of enhanced damages under 35 U.S.C. § 284.

**FOURTEENTH AFFIRMATIVE DEFENSE  
(No Exceptional Case)**

Arbor cannot prove its claims are exceptional, and is not entitled to an award of attorney fees including pursuant to 35 U.S.C. § 285.

**FIFTEENTH AFFIRMATIVE DEFENSE  
(No Enhanced Damages)**

Xilinx did not act in any matter that would justify an award of enhanced damages under any theory.

**SIXTEENTH AFFIRMATIVE DEFENSE  
(No Damages for Products for the United States)**

Arbor is precluded from obtaining any remedy against Xilinx for products used by or manufactured for the United States under 28 U.S.C. § 1498(a).

Dated: August 26, 2020

FISH & RICHARDSON P.C.

By: /s/ Warren K. Mabey, Jr.

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**ATTORNEYS FOR DEFENDANT  
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